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(54) **CORNER PAINT SHIELD**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/373,491**

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(51) **Int. Cl.**[7] **B05C 17/00**
(52) **U.S. Cl.** **118/504**; 118/505
(58) **Field of Search** 118/504, 505; 427/282

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,538,743 A * 1/1951 Alston 118/504
4,331,716 A * 5/1982 Stark 427/282

FOREIGN PATENT DOCUMENTS

CA 2176402 10/1996

* cited by examiner

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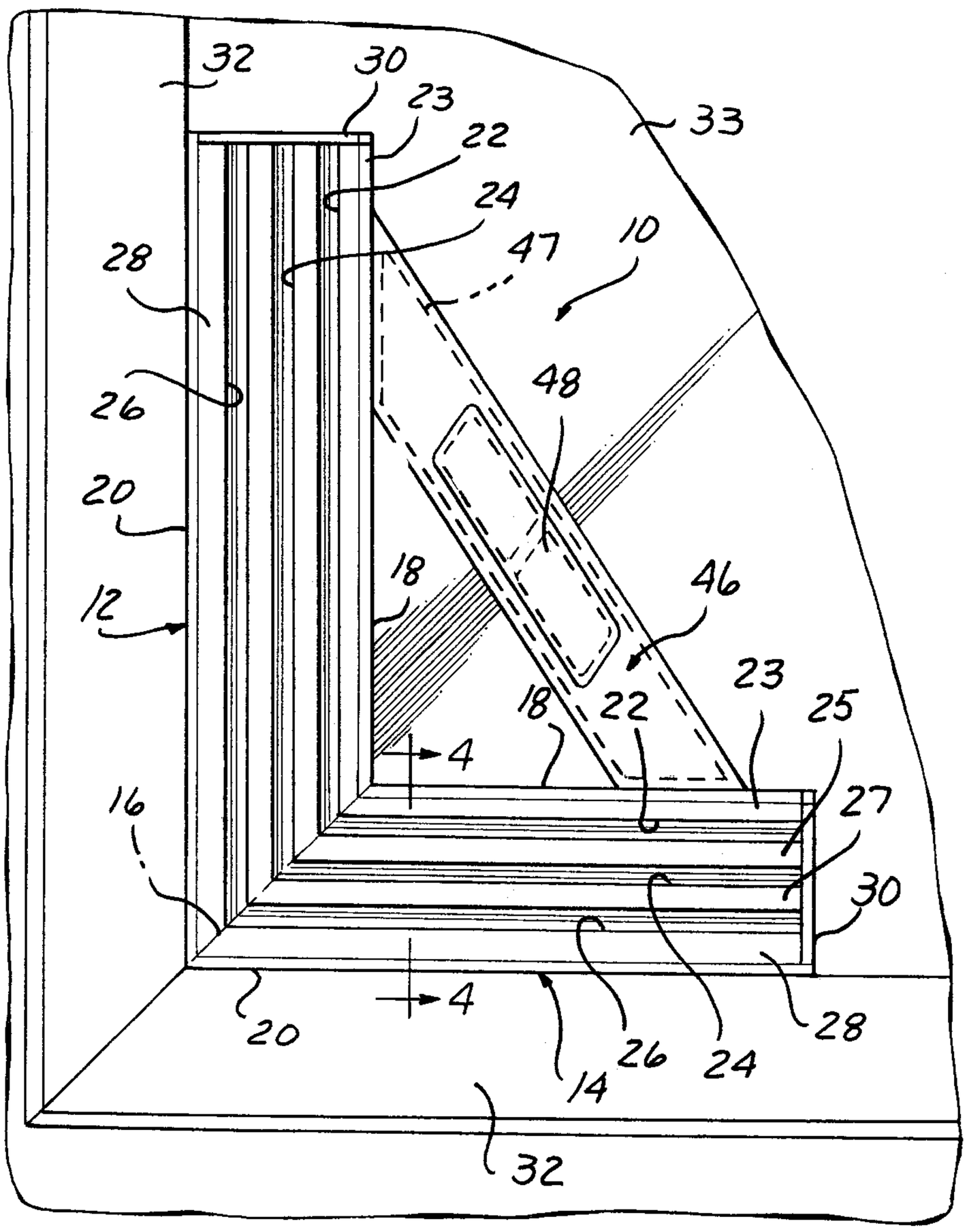
(57) **ABSTRACT**

A corner paint shield apparatus having at least one arm including at least one groove for collecting excess paint and an outer lip for preventing paint from seeping from the painted surface to one not intended to receive paint. The shield further includes a member attached to the arm for moving the paint shield to and from a desired position.

21 Claims, 3 Drawing Sheets



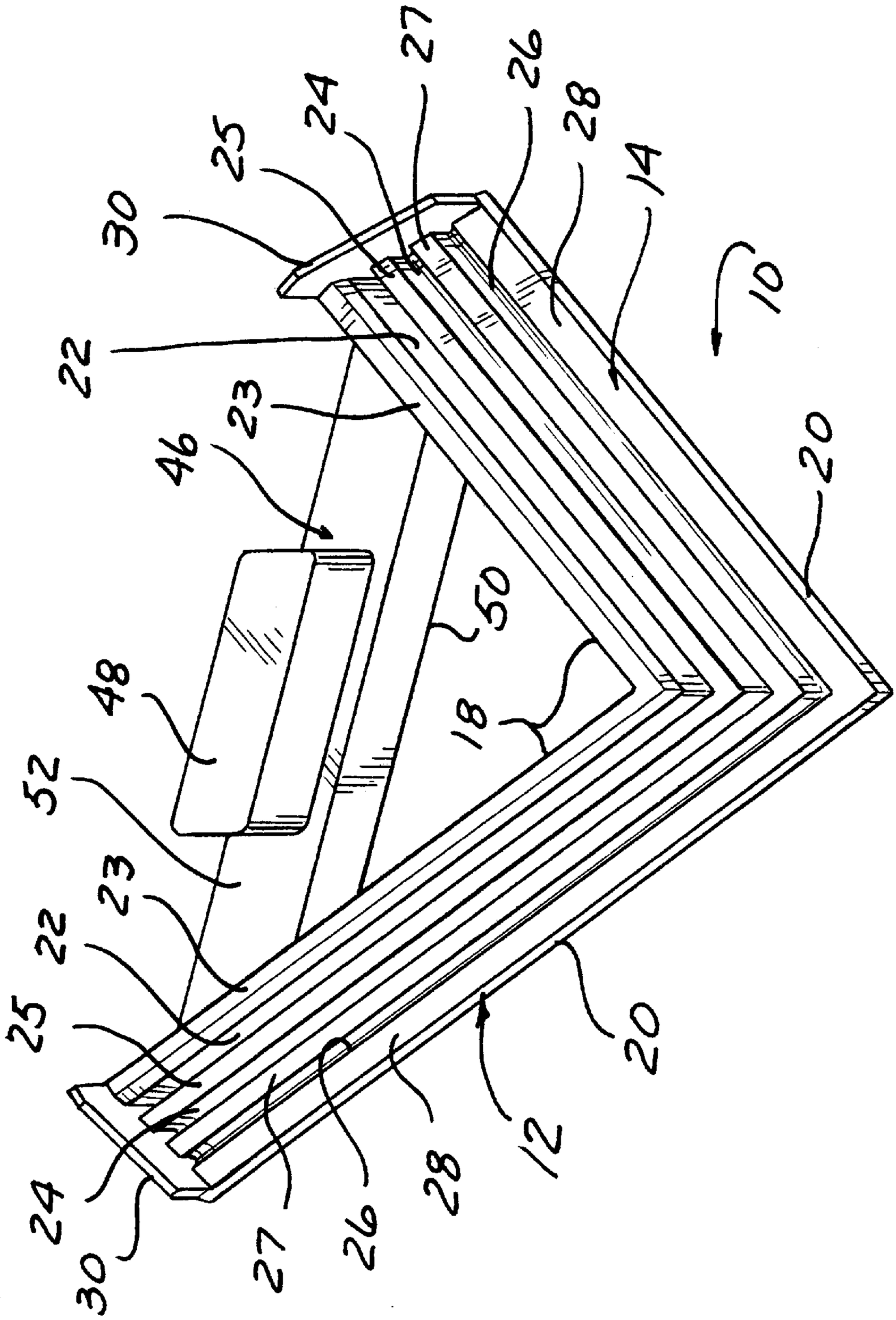


FIG. 1

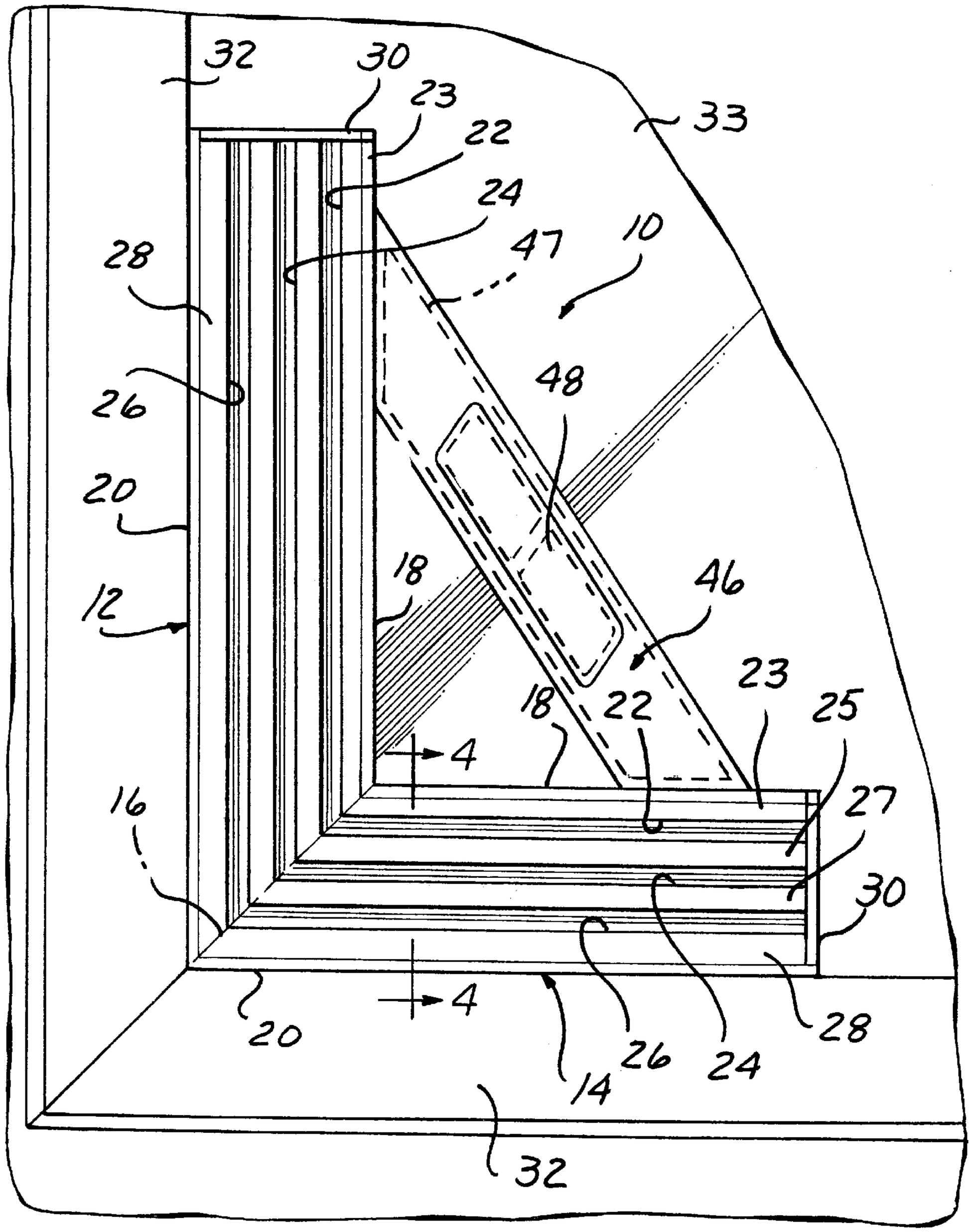

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FIG. 2

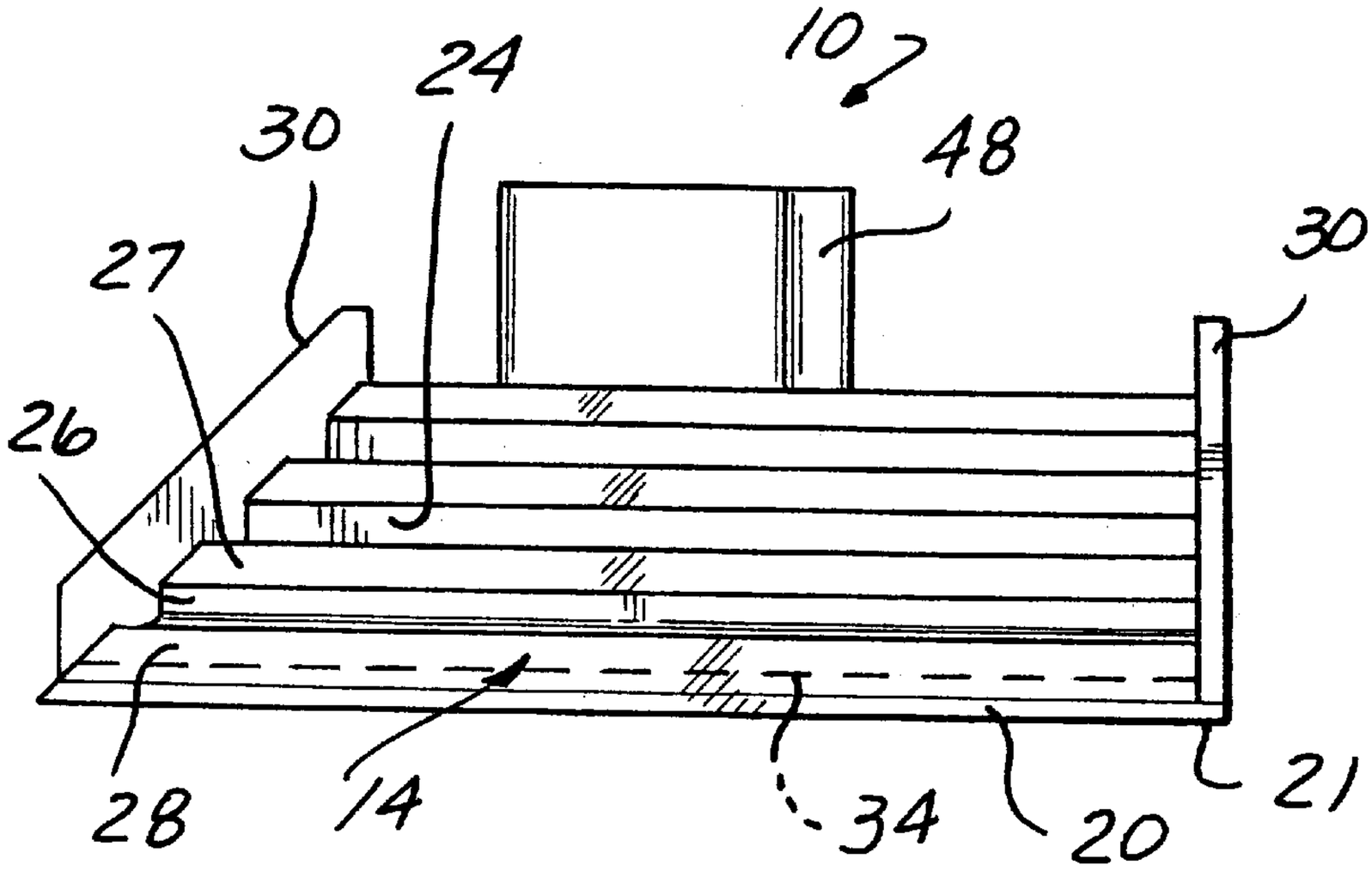
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FIG. 3

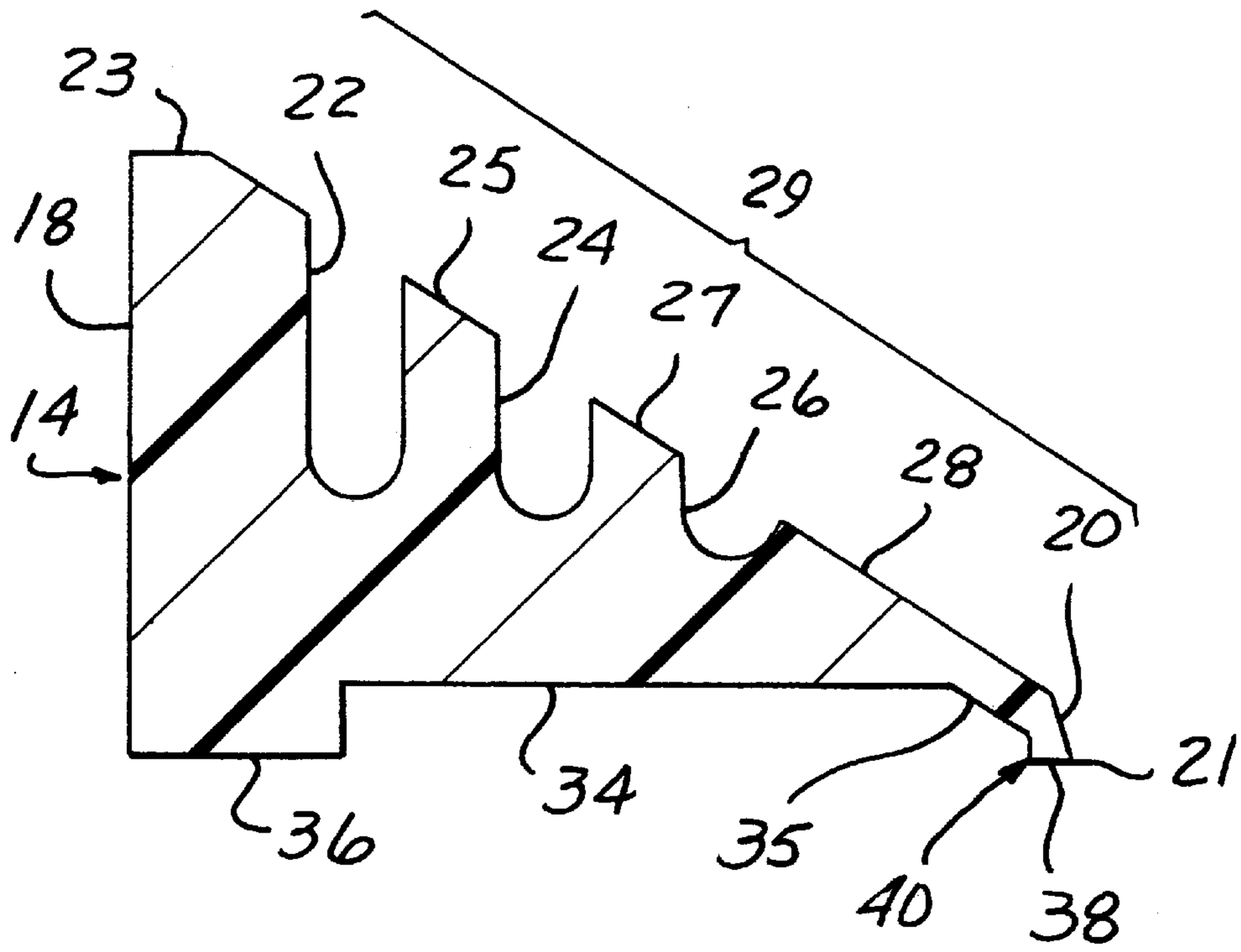
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FIG. 4

CORNER PAINT SHIELD

CROSS REFERENCE TO CO-PENDING APPLICATION

This application claims the benefit of the priority date of co-pending Provisional Application Ser. No. 60/096,254, filed Aug. 12, 1998 in the names of Barbara Meyer and Helmut Meyer, the entire contents of which are incorporated herein by reference.

FIELD OF THE INVENTION

The present invention relates to a shielding apparatus, particularly shields used for painting and, more particularly, to a corner paint shield for glass pane windows, doors, baseboards, ceilings, etc.

BACKGROUND OF THE INVENTION

Apparatus for shielding liquids, particularly paints and stains from an undesired area are known in the art. Such shields have taken the form of rolled adhesive tape and handheld devices with flexible or semi-rigid blades. The tape or blade is placed over the area that is not to receive the liquid, for exemplary purposes, paint. Once the shield is placed over the area to be protected, a paintbrush or roller may apply paint to the limits of the desired area in a not-so-careful manner such that if that the brush or roller goes beyond the desired location, excess paint will be applied to the shield and not the undesired surface.

A common application of paint in a highly visible area is on wood trim moldings around doors and windows. Accuracy on the application of paint around windows is required due to the undesirability of paint on the window screen or other window treatment. Of particular difficulty is in a corner where moldings form a 90° or other angle. When using a brush to apply paint, the corner tends to bunch up the bristles and an excessive amount of paint is unintentionally squeezed from the brush thereby depositing an overabundance of paint in the area. This condition results in the excess paint flowing to undesired areas necessitating difficult removal of the excess.

Straight, single blade shields are often ineffective as a device as they only protect one molding forming one half of the corner angle. Use of two, single blade shields is awkward to hold in position and control as described in Canadian Patent No. 2,176,402 to Spence. Such single blade devices also suffered from a lack of structural stability, difficulty in handling and deficiencies in collecting and holding excess paint.

The prior art shields described above are problematic due to the use of designs and materials which lack strength, stability, adequate rigidity and are difficult to use.

Prior art designs are also problematic due to the inability or deficiency to collect and hold excess paint or liquid deep in the corner or angle between adjoining moldings. The paint shield disclosed in Spence includes grooves that do not extend into and through the corner allowing for excess paint to deposit and uncontrollably flow to undesired areas as described above.

Prior art shields are also problematic through use of continuous and relatively large bottom contact surfaces that cover the area to be protected. This is disadvantageous in several respects. A large contact surface area on the shield increases the probability the contact surface will be nonplanar and the shield will be skewed and thus will not lie flat and closely conform to the surface to be protected. Similarly,

a large shield contact surface is also more prone to contact imperfections or obstructions in the surface to be protected which will force the shield away from the area to be covered. Additionally, and possibly most important, a large shield contact surface will distribute the force applied on the shield to the protective area thereby reducing the pressure from the critical area of the shield which is immediately adjacent and abuts the extreme edge of the surface to be painted.

These deficiencies permit, or increase the probability, that excess paint will pass by the shield to the area to be protected such as window glass.

Therefore, it would be desirable to provide a paint shield that improves upon or overcomes the problematic conditions in the prior art. It would also be desirable to provide a paint shield that is simple, inexpensive, easy and comfortable to use as well as being reusable an indefinite amount of times.

SUMMARY OF THE INVENTION

The present invention is a paint shield advantageously usable on a window, for example and more advantageously, in a corner of a window to protect the window glass from excess paint from a paint brush applying paint to a surrounding window trim molding.

The present invention includes at least one arm with a member attached thereto for manipulating the arm. The arm includes a top surface having at least one groove and an outer lip formed from the top surface and a bottom surface having a recess. The outer lip abuts the surface to be painted and prevents paint from seeping to the surface to be shielded from paint.

The arm of the present invention may terminate in a raised side wall at each end of the arm. The groove on a top surface of the arm extends substantially the entire length of the arm ending at the raised side walls or immediately adjacent thereto.

The outer lip may include an outer wall joining the top and bottom surfaces of the arm and may further include an outer edge formed by the outer wall and the bottom surface of the arm.

In a preferred aspect of the present invention, the paint shield includes first and second interconnected arms disposed at a 90° angle having a member extending between the first and second arms for manipulating the position of the paint shield.

BRIEF DESCRIPTION OF THE DRAWINGS

The various features, advantages and other uses of the present will become more apparent by referring to the following description of the drawings and detailed description of the invention.

The description herein makes reference to the accompanying drawings wherein like reference numerals refer to like parts throughout the several views, and wherein:

FIG. **1** is a perspective view of the window corner paint shield of the present invention;

FIG. **2** is a plan view of the window corner paint shield positioned in a window corner;

FIG. **3** is a side elevational view of the paint shield shown in FIG. **1**; and

FIG. **4** is an enlarged cross sectional view generally taken along the line of **4**—**4** in FIG. **2**.

DETAILED DESCRIPTION OF THE INVENTION

As shown in FIGS. **1**–**4**, the paint shield **10** is preferably in the form of a one piece, unitary, molded member. The

paint shield **10** is preferably formed of a molded plastic; although other materials, such as wood, composites, metal, etc., may also be employed. Further, the paint shield **10** is preferably formed with a substantially rigid construction to prevent flexing in use.

As shown in FIGS. **1** and **2**, by example only, the paint shield **10** includes first and second arms **12** and **14**, respectively. Preferably, the arms **12** and **14** are disposed 90° apart and interconnected at a common edge or joint **16** along a 45° angle. It will be understood that the paint shield of the present invention may also take other forms including one or more arms, such as a simple straight edge with one arm, or a square or other polygonal shape with a plurality of arms.

The first arm **12** and second arm **14** are similarly constructed. Thus, the following description of the construction of the second arm **14** will be understood to apply equally to the construction of the first arm **12**.

As shown in FIG. **4**, the second arm **14** has a generally wedge or triangular shape extending between a higher or longer height inner wall **18** to a short, angled outer wall **20**. Outer wall **20** ends at an outer edge **21**.

At least one, and preferably, a plurality of recessed grooves, with three recessed grooves **22**, **24** and **26** being illustrated by way of example, are formed in the top surface **29** of the second arm **14**. The recessed grooves **22**, **24** and **26** may take the form of many different cross sections, such as polygonal, circular, etc. Each of the grooves **22**, **24** and **26** project downwardly from the top surface **29** of the second arm **14** for a predetermined distance or depth. It is understood the number of recessed grooves, cross section configuration, and depth may vary to accommodate the particular liquid or application.

Flat top surface strips **23**, **25**, **27** and **28** are formed adjacent to each of the grooves **22**, **24** and **26**. Due to the preferred wedge or triangular shape of the arm **14**, the top surface strips **25**, **27** and **28** lie in a substantially common plane or along a common arc; but have a generally downwardly angled or sloped configuration from the top edge of the inner wall **18** to the top edge of outer wall **20**.

As shown in FIG. **4**, by example, outer wall **20** is angled or sloped with respect to top surface **29** and ends in an outer edge **21**. It is understood that outer wall **20** may vary in height between the outer edge **21** and the top edge of outer wall **20** adjacent top surface strip **28** to accommodate different profiles and surfaces of trim moldings **32**. Likewise, and for similar reasons, outer wall **20** may be vertical, angled or contoured to accommodate trim moldings **32**.

As best seen in FIGS. **1** and **3**, the recessed grooves **22**, **24** and **26** extend substantially the entire length of second arm **14**. Preferably, arm **14** includes a raised sidewall **30** which is located on and covers the end of arm **14**. The grooves **22**, **24** and **26** extend from side wall **30** to the edge or joint **16** between the first arm **12** and second arm **14**. In this manner, the recessed grooves **22**, **24** and **26** on both of the first and second arms **12** and **14**, respectively, are disposed in open communication with each other at the 90° angle or joint **16**. As shown in FIGS. **1** through **3**, the recessed grooves **22**, **24** and **26** end at another raised sidewall **30** on the first arm **12**. The raised sidewalls **30** prevent excess paint from flowing from the grooves to the trim molding **32** or surrounding window **33**. It is further understood that where paint shield **10** includes one arm, each end of the arm will preferably include a raised sidewall **30**. In an alternate aspect of the invention, the recessed grooves end or are closed immediately adjacent the end of first arm **12** and second arm **14** obviating the primary need for raised sidewalls **30**.

The recessed grooves **22**, **24** and **26** function to collect excess paint from a paintbrush or roller as the paintbrush or roller is moved along the conventional trim molding **32**, shown in FIG. **2**, surrounding a window **33**. The collected paint can be easily washed out or otherwise removed from the grooves **22**, **24** and **26** for reuse of the paint shield **10**. At the same time, the top surface strips **23**, **25**, **27** and **28** in conjunction with the recessed grooves **22**, **24** and **26**, form a solid, continuous surface overlaying the glass window **33** which prevents any paint from the paintbrush or roller from contacting the glass.

Although disclosed and shown for use in a window or window corner, it is understood that paint shield **10** is equally functionable for shielding paint or other materials from doors, ceilings, floors, baseboards, walls, trim moldings and the like.

As shown in FIG. **4**, a recess **34** is formed in the bottom surface of the first arm **12** and second arm **14** and extends substantially along the entire length of the first arm **12** and second arm **14**. The recess **34** extends laterally across the width of each of the first and second arms **12** and **14** respectively. The recess **34** forms a lip **40** which includes the outer wall **20**, outer edge **21** and an outer bottom surface **38**. Preferably outer edge **21** lies in the same plane as outer bottom surface **38**. Recess **34**, by example, is generally rectangular in shape and includes an angled portion **35** which is adjacent the outer bottom surface **38** of lip **40**. Angled portion **35** is generally parallel to the top surface strip **28** to maintain adequate material thickness for strength and rigidity. It is understood that both recess **34** and angled portion **35** may be of any size and shape to accommodate the environment or application of paint shield **10** or to improve the function and ease of use of paint shield **10**.

The configuration of lip **40** prevents, or reduces the possibility of, paint seeping past outer wall **20**, outer edge **21** and under the outer bottom surface **38** to the glass **33**. Outer bottom surface **38** is relatively narrow in a lateral direction and extends the entire length of first arm **12** and second arm **14**. This relatively small contact surface area or footprint effectively concentrates the weight of paint shield **10** and/or the force applied by the user on the shield to the glass window **33** thereby further reducing the possibility of paint passing by outer edge **21** and outer bottom surface **38**.

Recess **34** also forms an inner bottom surface **36**. Inner bottom surface **36** and outer bottom surface **38** are substantially in the same plane although it is understood the surfaces may be in different planes to accommodate a step or contour in the window **33** or molding **32** which shield **10** rests on and/or abuts.

As shown in FIGS. **1** and **2**, in a preferred aspect, a manipulating means or member **46** extends between the first arm **12** and second arm **14**. By example, the member **46** preferably has a general hollow configuration with a recess **47** extending upward from a bottom surface **50** contiguous with the inner bottom surface **36**. In this aspect, the member **46** bottom surface **50** lies in the same plane as the arm inner bottom surface **36** and arm outer bottom surface **38** permitting the paint shield **10** and accompanying member **46** to lie flat or flush against the window **33**. In an alternative aspect, the member bottom surface **50** may lie in a different plane from the arm bottom surfaces **36** and **38** to allow clearance, or interference as desired, of the member **46** with the window **33** or other details or obstructions.

Preferably, member **46** is integrally molded to first arm **12** and second arm **14**. However, it is understood member **46** may be attached using conventional attachments such as

mechanical fasteners or adhesive. In an alternative aspect, where the paint shield **10** includes only one arm, the member **46** is attached to the arm in a similar manner as described above.

In a preferred aspect, projection or handle **48** is attached on an upper surface **52** of member **46** to facilitate handling and movement of the paint shield **10**. Preferably, handle **48** is integrally molded with member **46** and is generally hollow and rectangular in form extending unitarily upward from a top surface **52** of the member **46**. Although handle **48** is shown as a generally rectangular-shaped projection, handle **48** may take any shape or form suitable for easily manipulating or moving the shield **10** such as a knob, a post, or if member **46** is positioned away from glass **33**, a through hole. Member **46** may itself be configured to act as a handle without a separate handle **48** formation.

Referring to FIG. **2**, in preferable operation, the paint shield **10** is positioned using member **46** and handle **48** in a window **33** surrounded by a conventional trim molding or frame **32**. The paint shield **10** is placed against the window glass pane **33** and is slid along the glass toward the desired position along the trim molding **32**. As shown in FIG. **2**, the preferred paint shield **10** includes two arms positioned 90° apart for use in a 90° corner.

The paint shield **10** is forced into the 90° corner of trim molding **32** such that outer wall **20** or, depending on the shape of the molding **32**, outer edge **21** is in abutting engagement with the outer surface of trim molding **32** (not shown). Pressure is maintained to position the paint shield **10** against the outer edge of trim molding **32** such that, as appropriate, outer wall **20** or outer edge **21** abuttingly engages the outer wall of trim molding **32**. Simultaneously, outer bottom surface **38** and inner bottom surface **36** abuttingly engages the glass pane of window **33**.

The operator then applies the paint to the desired location on trim molding **32**. In the event paint is applied beyond the outer edge of trim molding **32**, excess paint is collected and stored in recessed grooves **22**, **24** and **26** preventing excess paint from flowing onto window **33**. Recessed grooves **22**, **24** and **26** are continuous and therefore collect and store paint along the entire length of first and second arms **12** and **14** respectively.

As outer wall **20**, or outer edge **21**, abuttingly engages the outer surface of trim molding **32**, a minimal amount of paint, if any, will flow down outer wall **20** to outer edge **21**. Preferably, outer edge **21**, lies in the same plane as outer bottom surface **38** and thereby abuttingly engages the window **33** glass pane, preventing paint from passing to outer bottom surface **38**. Outer bottom surface **38** abuttingly engages window **33** preventing paint from seeping under outer bottom surface **38** onto additional portions of window **33**.

Upon completion of painting the corner of trim molding **32**, paint shield **10** is removed from window **33** and molding **32** through use of member **46** and handle **48**. Any excess paint that has been applied to the arm top surface **29** and collected in recessed grooves **22**, **24** and **26**, are easily removed through use of an appropriate cleaner for that paint or other liquid. The shield **10** is then ready for reuse.

What is claimed is:

1. A paint shield comprising:

at least one arm having a length and opposing ends, said arm having:

a top surface having at least one groove for collecting a liquid;

a bottom surface having a recess;

a lip, said lip formed from said top surface, said bottom surface and said recess; and

a member attached to said arm for manipulating the arm.

2. The paint shield of claim **1**, wherein said groove is continuous and extends substantially the entire length of said arm.

3. The paint shield of claim **1**, wherein said lip includes an outer edge along said bottom surface of said arm.

4. The paint shield of claim **1**, wherein said lip includes an outer wall joining said top surface and said bottom surface, said outer wall including an outer edge formed by said outer wall and said bottom surface.

5. A paint shield comprising:

at least one arm having a length and opposing ends, said arm having:

a top surface having at least one groove;

a bottom surface having a recess;

a lip, said lip formed from said top surface, said bottom surface and said recess;

a raised sidewall at said opposing ends of said arm; and

a member attached to said arm for manipulating the arm.

6. The paint shield of claim **1**, wherein said member is integral with said arm.

7. A paint shield comprising:

a first arm and a second arm interconnected at a common joint and angularly disposed from one another, said first and second arms having:

a top surface having at least one groove;

a bottom surface having a recess;

a lip, said lip formed from said top surface, said bottom surface and said recess; and

a member attached to said first and second arms for manipulating said arms.

8. The paint shield of claim **7**, wherein said groove is continuous and extends substantially the entire length of said first arm and said second arm.

9. The paint shield of claim **7**, wherein said first arm and said second arm include a raised sidewall at said opposing ends opposite said joint.

10. The paint shield of claim **7**, wherein said lip includes an outer wall joining said top surface and said bottom surface, said outer wall including an outer edge formed by said outer wall and said bottom surface.

11. A paint shield comprising:

at least one arm having a length and opposing ends, said arm having;

a top surface having at least one groove;

a bottom surface having a recess;

a lip, said lip having an outer wall joining said top and said bottom surface, said lip further having an outer edge formed by said bottom surface and said outer wall;

an inner wall, said inner wall joining said top surface and said bottom surface and is opposite said outer wall; and

a means for manipulating said paint shield.

12. The paint shield of claim **11**, wherein said groove is continuous and extends substantially the entire of said length of said arm.

13. The paint shield of claim **11**, wherein said arm includes a raised sidewall at said opposite ends of said arm.

14. The paint shield of claim **11**, wherein the inner wall is of greater height than said outer wall, and wherein, said top surface is angled from said inner wall to said outer wall.

15. The paint shield of claim **11**, wherein said recess forms an inner bottom surface adjacent said inner wall and said recess forms an outer bottom surface adjacent said outer edge.

16. The paint shield of claim 11, wherein said means for manipulating include a member attached to said arm.

17. The paint shield of claim 16, wherein the means for manipulating includes a handle attached to said member.

18. A paint shield having at least one arm having a length and opposite ends, said arm having a top surface including at least one groove, a bottom surface, an outer edge and a handle, the improvement comprising:

said bottom surface having a recess, and

a lip, said lip formed by said recess and said top surface, said lip having an outer wall between said top surface and said outer edge, said lip having an outer bottom surface between said outer edge and said recess.

19. The improvement of claim 18, wherein said groove is continuous and extends substantially the entire of said length of said arm.

20. The improvement of claim 18, wherein said arm includes a raised sidewall at said opposite ends.

21. A paint shield comprising:

a first arm and a second arm interconnected at a common joint and angularly disposed from one another, said arms having:

a top surface having at least one groove for collecting a liquid;

a bottom surface;

a lip, said lip formed from said top surface and said bottom surface; and

a member attached to said arm for manipulating the arm.

* * * * *